

Applicants thank Examiners Ponomarenko and Gonzalez for the courtesies extended to the Applicants' representative, John Harrop, during a March 13, 2002 personal interview. The substance of the interview is incorporated in the remarks that follow.

On page 2 the Office Action objects to Figures 1 and 2. Figures 1 and 2 are amended to include the legend "Prior Art." Withdrawal of the objection to Figures 1 and 2 is respectfully requested.

Also on page 2 the Office Action objects to the drawings because the reference 107 shown in Figure 3 is not included in the written description. As noted above, the specification is amended to include a description of reference 107. Support for the change to the specification can be seen in Figure 3, where the AC power out connection is shown as reference 107, and in Figure 5, where a corresponding AC power out connection 129 is illustrated. Withdrawal of the objection to the drawings is respectfully requested.

Finally on page 2 the Office Action objects to the drawings under 35 C.F.R. § 1.83(a) for allegedly not showing every feature of the invention specified in the claims. In particular, the drawings were objected to for not showing the heat generating source of claim 3, the solar cell of claim 4, the wind turbine of claim 5, and the flywheel apparatus of claim 13.

Applicants assert that these means for generating electricity are adequately shown in the Figures as the power generation module 101 shown in Figure 3. As noted in the specification, the power generation module 101 may take many forms, including that of a heat generating source, such as radioactive material, including plutonium 239, a wind turbine, and a solar cell. All these features are well known to persons of ordinary skill in the art and the exact mechanical details of their construction and connection in the module 101 is not part of the claimed invention. The fly wheel apparatus recited in claim 13 is designed to store electrical energy for possible use during times when the power generation module does not provide sufficient electrical power. See specification, page 7, lines 20-23. Use of fly wheel devices for energy storage is also well known to those ordinary skill in the art. Accordingly, the rendition of the module 101 in Figure 3 meets the requirements of 37 C.F.R. § 1.83(a) for showing every feature of the claimed invention. Withdrawal of the objection to the drawings under 37 C.F.R. § 1.82(a) is respectfully requested.

On page 3 the Office Action rejects 1-13 under 35 U.S.C. § 112, first paragraph. This rejection is respectfully traversed.

The Office Action notes that the application discloses several means for producing electricity but does not describe how the components will be incorporated into the invention. The Office Action also asks how the heat generating source would function, how it produces

electricity, and whether the heat generating source or the retrofittable power supply produces electricity.

As noted above, a heat generating source, a solar cell, and a wind turbine are all possible devices that are capable of being incorporated into the module 101 shown in Figure 3 to produce electricity. As such, these means for producing electricity are component parts of the retrofittable power supply. Taking a heat source as an example, persons of ordinary skill in the art know that heat sources can be used to generate heat. The heat can then be converted into electricity, and the electricity provided to components connected to the device (here, the retrofittable power supply) that converts the heat into electricity by use of a thermal prime mover. As agreed to during the personal interview, claims 3 and 8 are hereby amended to recite the heat source driving a thermal prime mover to generate the DC power. A similar analysis applies to the wind turbine and the solar cell. Applicants further note that a fuel cell can also be incorporated into the module 101 to provide electricity for components connected to the retrofittable power supply. A fuel cell is described in detail at least on page 7, line 3 through page 8, line 4.

In view of the above, Applicants respectfully request withdrawal of the rejection of claims 1-13 under 35 U.S.C. § 112, first paragraph.

On page 3 the Office Action also rejects claims 1-13 under 35 U.S.C. § 112, second paragraph as being indefinite. This rejection is respectfully traversed.

The Office Action asks that with respect to claim 1 what is meant by a housing having a form factor equal to a power supply.

The invention as recited in claim 1 includes a housing having a form factor equal to a power supply. The term "form factor" is well known to one of ordinary skill in the art. In particular, and as discussed at the personal interview, the term "form factor" is commonly used in the computer manufacturing field. For example, the Web site formfactors.org describes use of form factors for computer mother boards. A copy a Web page from the Web site is attached hereto. The term "form factor" refers to the physical characteristics, including dimensions of a device. The use of the dimensions of the existing power supply 10 shown in Figure 2, for example, is discussed on page 5 of the specification at lines 25-33. In particular, and as discussed during the personal interview, the specification defines a form factor of the power supply 10 to include the dimensions and other criteria that determine the shape and other characteristics of the power supply 10. See page 5, lines 31-33. The retrofittable power supply 100 shown in Figure 3, therefore, includes the dimensions a, b, and c equal to corresponding dimensions a, b, and c for the power supply 10 shown in Figure 2. See page 6,

lines 13-15 of the specification. The specification also notes that other characteristics of the retrofittable power supply 100 may be made to coincide with those of the power supply 10. As a result, the retrofittable power supply 100 may simply be inserted into the framework or bay normally used to house the power supply 10. Thus, the invention as recited in claim 1 is a wireless retrofittable power supply that can replace an existing wired power supply by simply removing the existing wired supply and inserting the retrofittable power supply.

In view of the above, Applicants assert that claims 1-13 are not indefinite.

Withdrawal of the rejection of claims 1-13 under 35 U.S.C. § 112, second paragraph is respectfully requested.

On page 4 the Office Action rejects claims 1, 6, 7 and 11 under 35 U.S.C. § 102(e) over U.S. patent 6,121,695 to Loh (hereafter Loh). This rejection is respectfully traversed.

The Office Action asserts that Loh discloses a power supply having a housing, a DC power generator, a battery 32, a DC/AC converter 40 and one or more AC connections 70, 72.

As discussed during the personal interview, Loh is directed to a modular power supply for use with electrical equipment such as computers. The power supply includes one or more bays or module areas in which power supplies may be inserted. That is, the modular power supply may include a housing with a plurality of modules that are connected together and in parallel when received in the housing. The modular power supply then provides electrical power to the electrical equipment. However, and as discussed during the personal interview, Loh's power supply module 2 is neither wireless (see, e.g., Figure 2) nor designed with a form factor equal to that of an existing wired power supply (see, e.g., col. 5, lines 48-58).

In contrast to Loh, claim 1 recites a retrofittable wireless power supply device comprising a housing having a form factor equal to a wired power supply device. As discussed above, the form factor refers to the physical dimensions of the power supply, and other characteristics of the power supply that may be needed so that the wireless power supply may replace the wired power supply. This feature is not disclosed or suggested by Loh. Accordingly, claim 1 is patentable. Claim 6 is a means-plus function claim generally corresponding to apparatus claim 1. In particular, claim 6 recites means for housing a retrofittable power supply, the means for housing having a form factor equal to that of a wired power supply device. Thus, claim 6 recites features that generally correspond to those of apparatus claim 1, but are written in means-plus function language. Therefore, for the same reasons as noted above with respect to claim 1, claim 6 is also patentable. Claim 7 and

11 depend from claim 6, and for this reason and the additional features they recite, claims 7 and 11 are also patentable. Withdrawal of the rejection of claims 1, 6, 7 and 11 under 35 U.S.C. § 102(e) is respectfully requested.

On page 5 the Office Action rejects claims 2 and 12 under 35 U.S.C. § 103(a) over Loh in view of U.S. patent 5,654,113 to Vaidyanathan et al. (hereafter Vaidyanathan). This rejection is respectfully traversed. As noted above, claims 1 and 6 are patentable. Claim 2 depends from claim 1 and claim 12 depends from claim 6, and for this reason and the additional features they recite, claims 2 and 12 are also patentable. Withdrawal of the rejection of claims 2 and 12 under 35 U.S.C. § 103(a) is respectfully requested.

On page 6 the Office Action rejects claims 3 and 8 under 35 U.S.C. § 103(a) over Loh in view of U.S. patent 5,693,201 to Hsu et al. (hereafter Hsu). This rejection is respectfully traversed.

As noted above, claims 1 and 6 are patentable. Claim 3 depends from claim 1 and claim 8 depends from claim 6. For this reason and the additional features they recite, claims 3 and 8 are also patentable. Withdrawal of the rejection of claims 3 and 8 under 35 U.S.C. § 103(a) is respectfully requested.

On page 6 the Office Action also rejects claims 4, 5, 9, 10 and 13 under 35 U.S.C. § 103(a) over Loh. This rejection is respectfully traversed.

As noted above, claims 1 and 6 are patentable. Claims 4 and 5 depend from claim 1 and claims 9, 10 and 13 depend from claim 6. For this reason and the additional features they recite, claims 4, 5, 9, 10 and 13 are also patentable. Withdrawal of the rejection of claims 4, 5, 9, 10 and 13 under 35 U.S.C. § 103(a) is respectfully requested.

In view of the above amendments and remarks, Applicants respectfully assert that the application is in condition for allowance. Prompt reexamination and allowance of claims 1-13 is respectfully requested.

Respectfully submitted,


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Attachment: Web page

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the specification

Line 13 of page 6 has been amended to read:

To solve this geographical use limitation and other problems inherent in the power supply 10 shown with the non-portable electronic device 1, a retrofittable power supply 100 having a same form factor as the power supply 10 shown in Figure 2, is provided as shown in Figure 3. The retrofittable power supply 100 includes a power generation module 101, a cooling module 103, and a DC/AC generation module 105. Also shown is an AC power out connection 107. As illustrated in Figure 3, the retrofittable power supply 100 has dimensions a, b and c equal to the corresponding dimensions a, b and c shown for the power supply 10 in Figure 2. Other characteristics of the retrofittable power supply 10 may be made to coincide with those of the power supply 10. Accordingly, the retrofittable power supply 100 may simply be inserted into the framework or bay normally used to house the power supply 10.

In the Claims

1. (Amended) A retrofittable, wireless power supply device, comprising:
 - a housing having a form factor equal to that of a wired power supply device;
 - a self-contained, non-renewable power generation module within the housing, the power generation module comprising:
 - a DC power generator, the DC power generator capable of generating DC power for use in an electronic device, and
 - a DC/AC converter that generates AC output power using the generated DC power; and
 - one or more AC power output connections, connections, wherein the retrofittable power supply device replaces the wired power supply device.
3. (Amended) The retrofittable, wireless power supply device of claim 1, wherein the DC power generator comprises a heat generating source driving a thermal prime mover to generate the DC power.
6. (Amended) The retrofittable power supply for use in a non-portable electronic device, comprising:

means for housing the retrofittable power supply device, the means for housing having a form factor equal to that of a wired power supply device used in the non-portable electronic device;

means for generating power, comprising:

self-contained, non-renewable means for generating DC power, and

means for converting the generated DC power to AC power; and

means for outputting the AC power.

8. (Amended) The power supply of claim 6, wherein the means for generating DC power comprises heat generating means, the heat generating means comprising a heat source driving a thermal prime mover to generate the DC power.